

An aerial photograph of a vast forest landscape, showing a mix of green and brown patches, likely representing different forest types or stages of insect damage. The view is from a high altitude, looking down on the terrain. A bright yellow light flare is visible on the left side of the image, partially obscuring the forest. The text is overlaid on the center of the image.

# Forest Insect Pests – 30,000 Foot Overview

Presentation to the  
Oregon Board of Forestry  
Federal Forestland Advisory Committee

October 15, 2007

# Questions to be Addressed

1. What are the major insect pests we need to be concerned about?
2. What are the frequency and extent of serious insect outbreaks?
3. What are the dynamics/causes of these outbreaks?
4. How do these insect pests respond to management activities or a lack there of?
5. How is/will global climate change affect insect pest dynamics/outbreaks?
6. **What federal policies would you change to deal with these problems?**
7. **What barriers exist that would prevent these policies from being implemented?**
8. **How would you overcome these barriers?**

# What are the major insect pests we need to be concerned about?

- **Bark Beetles**
  - Douglas-fir beetle
  - Mountain pine beetle
  - Western pine beetle
  - Fir engraver
- **Defoliators**
  - Western spruce budworm
  - Douglas-fir tussock moth
- **Introduced species**
  - Balsam woolly adelgid
  - Gypsy moth
  - Emerald ash borer
  - Unknowns???



# What are the frequency and extent of serious insect outbreaks?

- Varies with the insect species
- Examples:
  - DFTM – 9-12 year cycles
  - MPB – 80-100+ years at a given site, somewhere in Oregon more frequently
  - DFB – triggered by disturbances that aren't predictable, windstorms, wildfire
  - Introduced species – potentially every year

# What are the dynamics/causes of these outbreaks?

- Varies with the insect species
  - **Forest stand conditions**, without susceptible host – no outbreak
  - Disturbance events
  - Favorable weather
  - Natural enemies – predators, parasites, viruses

How do these insect pests respond to management activities or a lack there of?

- Varies with the insect species
- Management/Lack of Management → More or less favorable habitat
- Examples
  - Bark beetles – stand density, remove or treat recently dead or dying trees, creating woody debris
  - Defoliators – fire suppression; reduce abundance of fir on warm, dry sites

# How is/will global climate change affect insect pest dynamics/outbreaks?

- No simple answer. Some may have more frequent/widespread outbreaks, others may have less frequent/widespread outbreaks.
- Complex systems with many interactions
- Possibilities:
  - Develop more rapidly, but so will natural enemies
  - Host trees more stressed
  - Extreme weather events during susceptible stages
  - Uncoupling of insect and host tree phenologies

# What federal policies would you change to deal with these problems?

- Clearly define and articulate management objectives – what is the mission(s)?
- Revise NEPA process to allow more timely management actions
  - For example, harvesting windthrown or fire-damaged trees to prevent bark beetle outbreaks
- Provide resources for treating large areas
  - Reducing fire hazard
  - Treat overstocked stands
- Develop management plans that address the public-private interface
  - potential for conflicts, insects don't respect boundaries, management on public lands affects forest insect pests on neighboring lands
- Maintain and enhance efforts to prevent new introductions and eradicate those that occur
  - Accountability for new introductions
- Maintain, increase research funding

What barriers exist that would prevent these policies from being implemented?

- Competing views on how federal forestland should be managed – management by the courts
- Lack of resources to implement management
- Lack of knowledge

How would you overcome these barriers?

- Clarify management objectives
- Streamline and clarify legislation on management of federal timberlands to allow timely and effective actions to be taken
- Increase funding for management of federal lands and forest insect research